10.3 Temperature Monitor. Calibrate as in Method 2, Section 4.3, before the first certification test and semiannually thereafter.

10.4 Moisture Meter. Calibrate as per the manufacturer's instructions before each certification test.

10.5 Anemometer. Calibrate the anemometer as specified by the manufacturer's instructions before the first certification test and semiannually thereafter.

10.6 Barometer. Calibrate against a mercury barometer before the first certification test and semiannually thereafter.

10.7 Draft Gauge. Calibrate as per the manufacturer's instructions; a liquid manometer does not require calibration.

10.8 Humidity Gauge. Calibrate as per the manufacturer's instructions before the first certification test and semiannually thereafter.

11.0 Analytical Procedures

Same as Section 11.0 of either Method 5G or Method 5H.

12.0 Data Analysis and Calculations

Same as Section 12.0 of either Method 5G or Method 5H, with the addition of the following:

12.1 Nomenclature.

BR = Dry wood burn rate, kg/hr (lb/hr)

E_i = Emission rate for test run, i, from Method 5G or 5H, g/hr (lb/hr)

E_w = Weighted average emission rate, g/hr (lb/hr)

k_i = Test run weighting factor = $P_{i+1} - P_{i-1}$

$\%M_d$ = Fuel moisture content, dry basis, percent.

$\%M_w$ = Average moisture in test fuel charge, wet basis, percent.

n = Total number of test runs.

P_i = Probability for burn rate during test run, i, obtained from Table 28–1. Use linear interpolation to determine probability values for burn rates between those listed on the table.

W_{wd} = Total mass of wood burned during the test run, kg (lb).

12.2 Wet Basis Fuel Moisture Content.

$$\%M_w = \frac{100(\%M_d)}{100 + \%M_d} \qquad \text{Eq. 28-2}$$

12.3 Weighted Average Emission Rate. Calculate the weighted average emission rate (E_w) using Equation 28–1:

$$E_w = \frac{\sum_{i=1}^{n}(K_i E_i)}{\sum_{i=1}^{n} K_i} \qquad \text{Eq. 28-3}$$

NOTE: P_o always equals 0, $P_{(n+1)}$ always equals 1, P_1 corresponds to the probability of the lowest recorded burn rate, P_2 corresponds to the probability of the next lowest burn rate, etc. An example calculation is in Section 12.3.1.

12.3.1 Example Calculation of Weighted Average Emission Rate.

Burn rate category	Test No.	Burn rate (Dry-kg/hr)	Emissions (g/hr)
1	1	0.65	5.0
2[1]	2	0.85	6.7
2	3	0.90	4.7
2	4	1.00	5.3
3	5	1.45	3.8
4	6	2.00	5.1

[1] As permitted in Section 6.6, this test run may be omitted from the calculation of the weighted average emission rate because three runs were conducted for this burn rate category.

Test No.	Burn rate	P_i	E_i	K_i
0	.....	0.000	.....	.....
1	0.65	0.121	5.0	0.300
2	0.90	0.300	4.7	0.259
3	1.00	0.380	5.3	0.422
4	1.45	0.722	3.8	0.532
5	2.00	0.912	5.1	0.278
6	.....	1.000	.....	.....

$K_1 = P_2 - P_0 = 0.300 - 0 = 0.300$
$K_2 = P_3 - P_1 = 0.381 - 0.121 = 0.259$
$K_3 = P_4 - P_2 = 0.722 - 0.300 = 0.422$
$K_4 = P_5 - P_3 = 0.912 - 0.380 = 0.532$
$K_5 = P_6 - P_4 = 1.000 - 0.722 = 0.278$